EP 1 507 069 A1

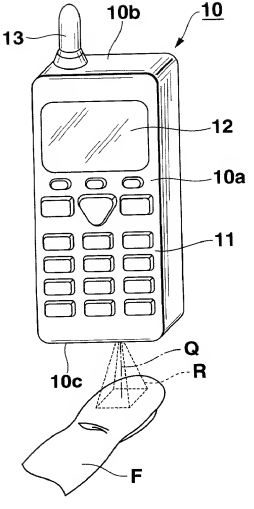


FIG.1A

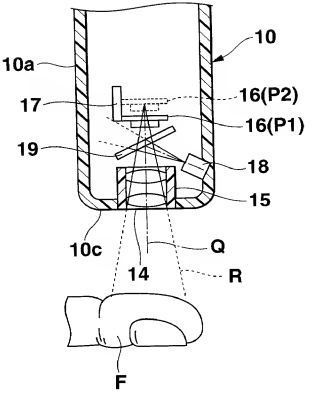


FIG.1B

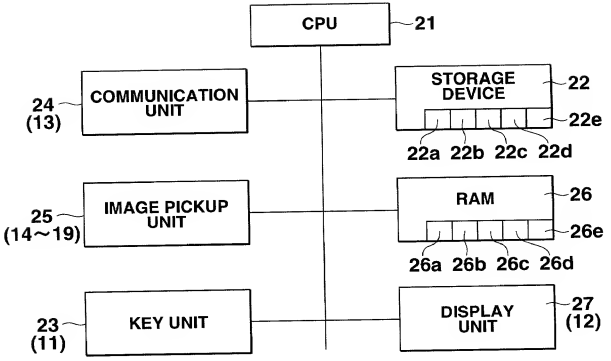

CPU
21
COMMUNICATION UNIT
24
(13)
STORAGE DEVICE
22
22e
22a 22b 22c 22d
IMAGE PICKUP UNIT
25
(14~19)
RAM
26
26e
26a 26b 26c 26d
KEY UNIT
23
(11)
DISPLAY UNIT
27
(12)

FIG.2

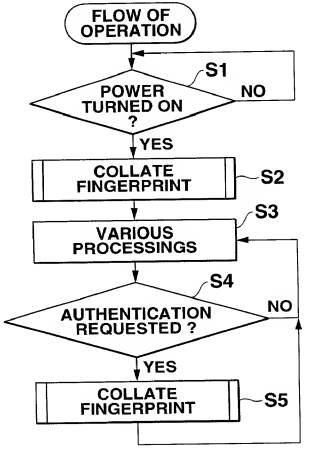

FLOW OF OPERATION
S1
POWER TURNED ON ?
NO
YES
COLLATE FINGERPRINT
S2
S3
VARIOUS PROCESSINGS
S4
AUTHENTICATION REQUESTED ?
NO
YES
COLLATE FINGERPRINT
S5

FIG.3

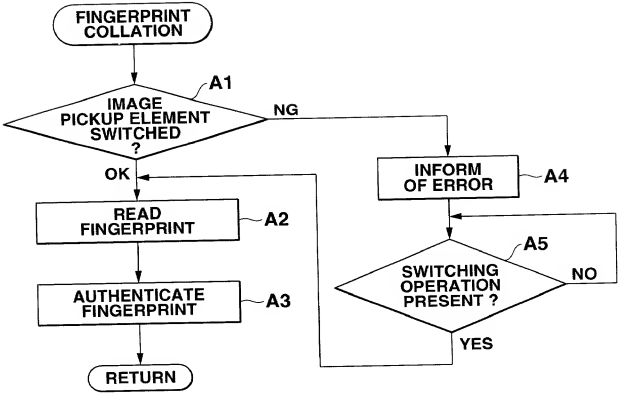

FINGERPRINT COLLATION
A1
IMAGE PICKUP ELEMENT SWITCHED ?
NG
OK
INFORM OF ERROR
A4
READ FINGERPRINT
A2
A5
SWITCHING OPERATION PRESENT ?
NO
AUTHENTICATE FINGERPRINT
A3
YES
RETURN

FIG.4

09015469 070901

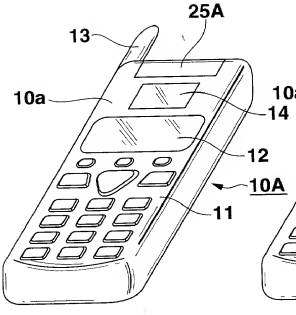


FIG.5A

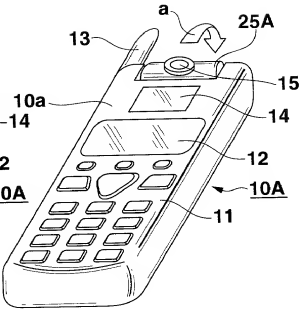


FIG.5B

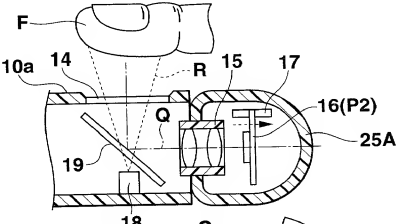


FIG.6A

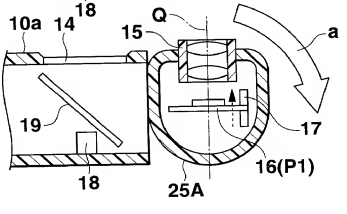


FIG.6B

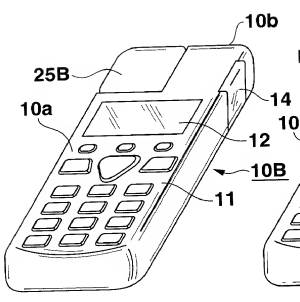


FIG.7A

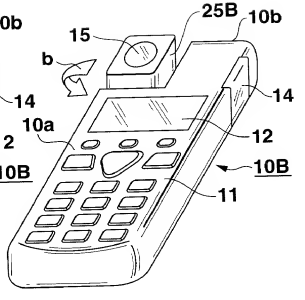


FIG.7B

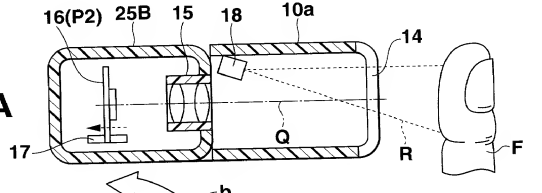


FIG.8A

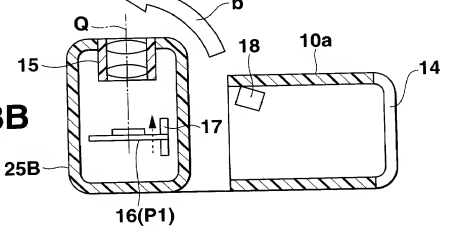


FIG.8B

EP 1 050 670 A1

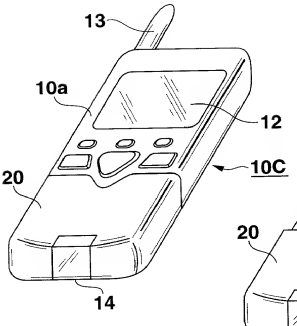


FIG.9A

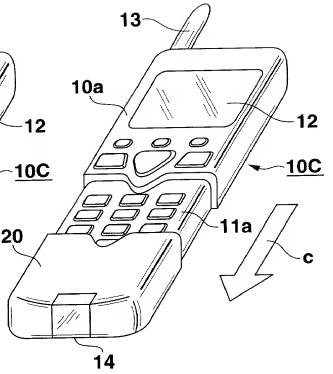


FIG.9B

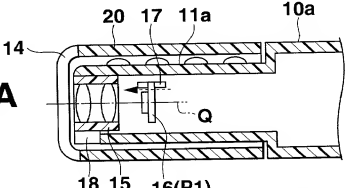
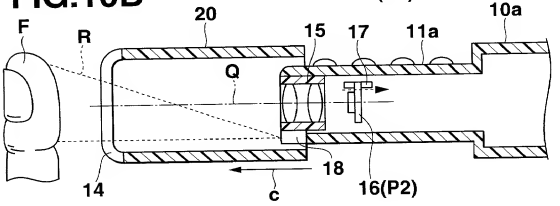


FIG.10A

FIG.10B



1060J0 "6455T0660

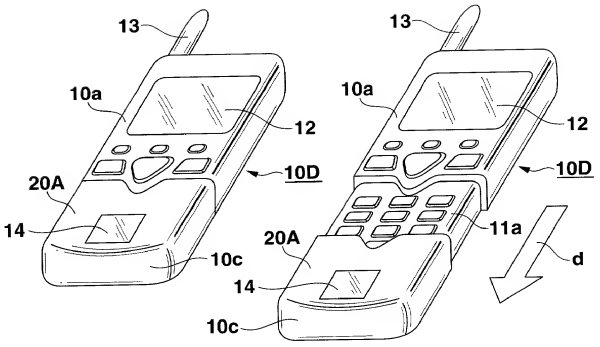


FIG.11A FIG.11B

FIG.12A

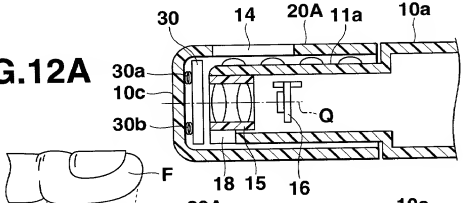
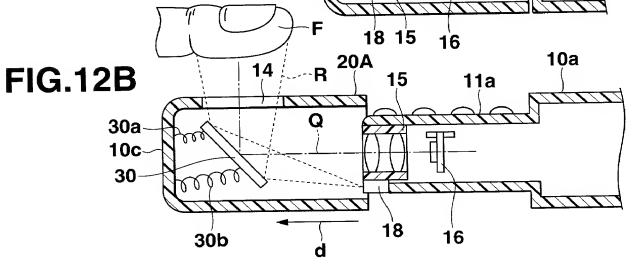


FIG.12B



T06D20 '6hST060

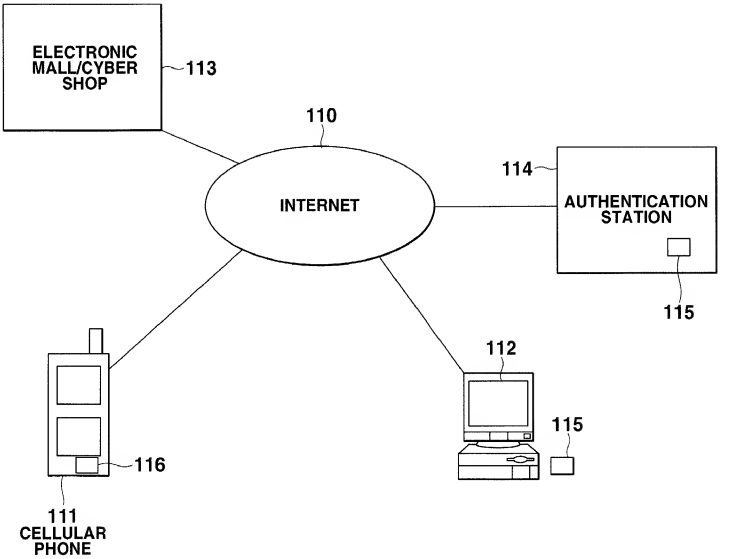


FIG.13

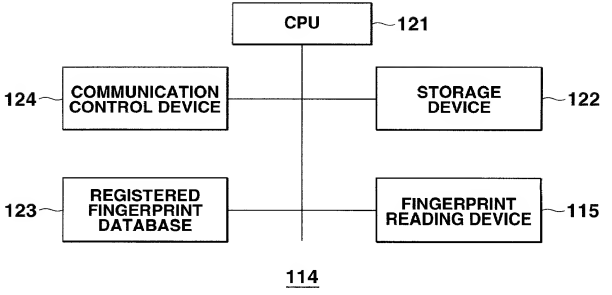


FIG.14

123 (SERVER REGISTRATION DATABASE)

NAME	ID	REGISTERED FINGERPRINT IMAGE	IMAGE SPECIFICATION	EXTERNAL OUTPUT	ENABLE TERMINAL
AIDA	0001		8 bit color, 300×300dot, 50mpitch	ENABLE	xxx
TANAKA	0002			DISABLE	
NAKAMATSU	0003			DISABLE	
MATSUMOTO					
MOTOKI					

FIG.15

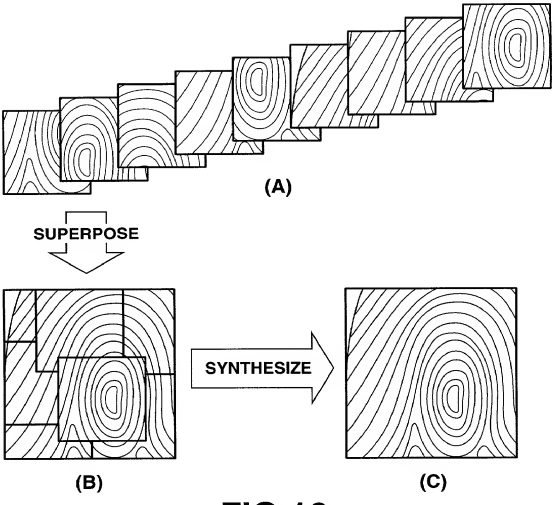


FIG.16

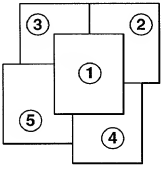


FIG.17

EP 0 854 436 A2

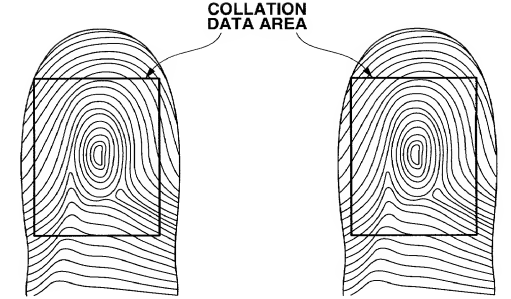


FIG.18

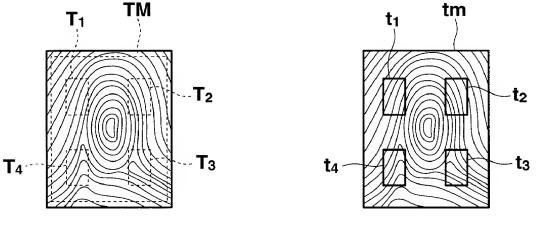


FIG.19

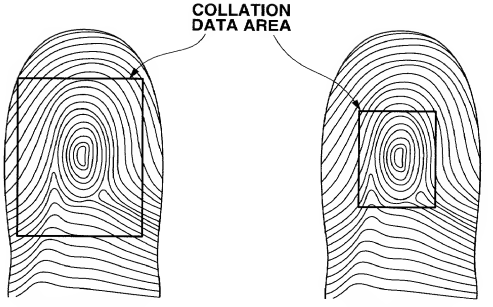


FIG.20

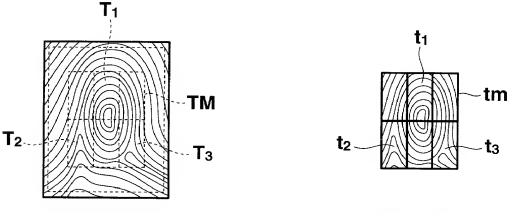


FIG.21

DATA SIZE	PIXEL PITCH	GRADATION DATA	TOP OR BOTTOM

(IMAGE HEADER DATA)

FIG.22

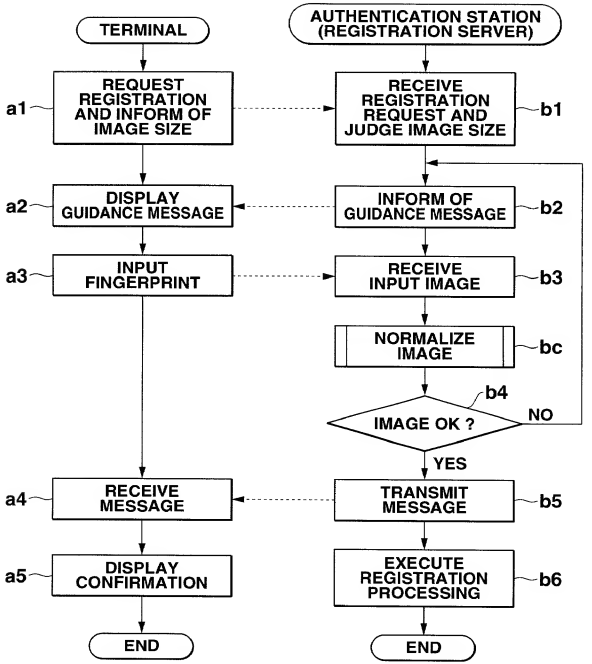

TERMINAL
AUTHENTICATION STATION (REGISTRATION SERVER)
a1
REQUEST REGISTRATION AND INFORM OF IMAGE SIZE
RECEIVE REGISTRATION REQUEST AND JUDGE IMAGE SIZE
b1
a2
DISPLAY GUIDANCE MESSAGE
INFORM OF GUIDANCE MESSAGE
b2
a3
INPUT FINGERPRINT
RECEIVE INPUT IMAGE
b3
NORMALIZE IMAGE
bc
b4
IMAGE OK ?
NO
YES
a4
RECEIVE MESSAGE
TRANSMIT MESSAGE
b5
a5
DISPLAY CONFIRMATION
EXECUTE REGISTRATION PROCESSING
b6
END
END

FIG.23

09901545-072501

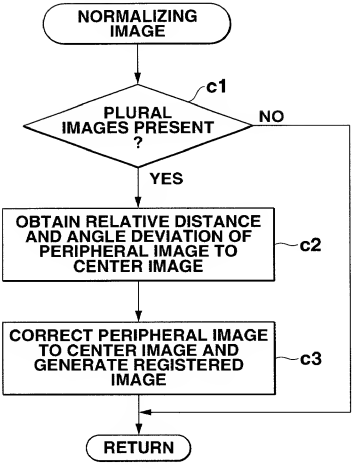


FIG.24

EP 0 967 584 A1

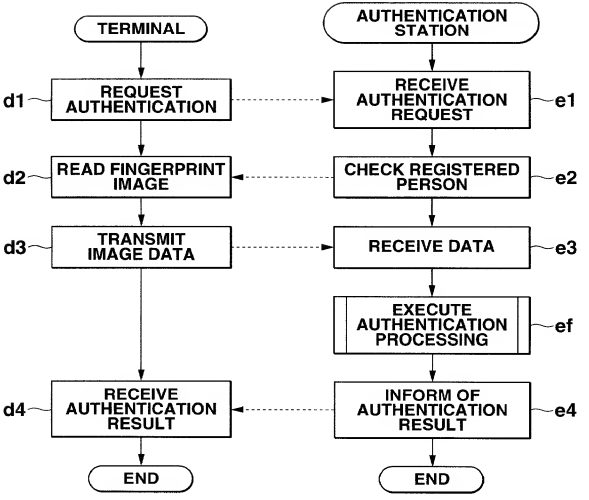


FIG.25

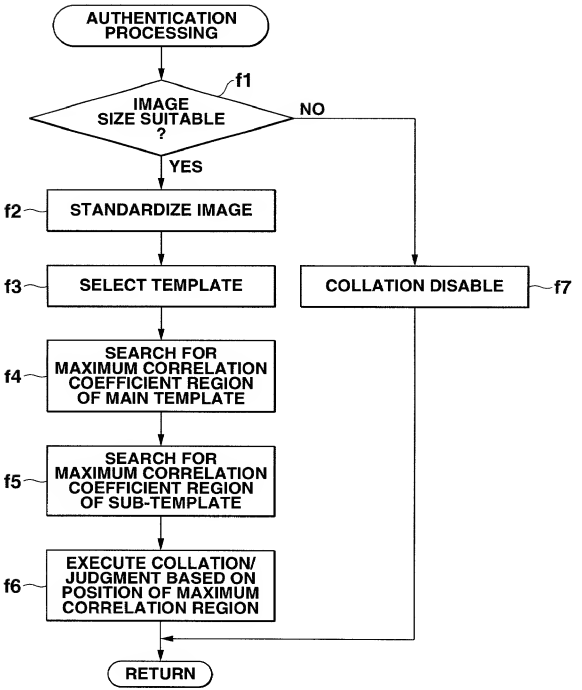

AUTHENTICATION PROCESSING
f1
IMAGE SIZE SUITABLE ?
NO
YES
f2
STANDARDIZE IMAGE
f3
SELECT TEMPLATE
COLLATION DISABLE
f7
f4
SEARCH FOR MAXIMUM CORRELATION COEFFICIENT REGION OF MAIN TEMPLATE
f5
SEARCH FOR MAXIMUM CORRELATION COEFFICIENT REGION OF SUB-TEMPLATE
f6
EXECUTE COLLATION/ JUDGMENT BASED ON POSITION OF MAXIMUM CORRELATION REGION
RETURN

FIG.26

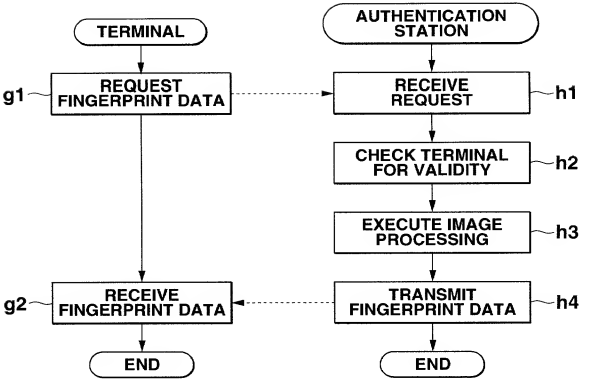

TERMINAL
AUTHENTICATION STATION
g1
REQUEST FINGERPRINT DATA
RECEIVE REQUEST
h1
CHECK TERMINAL FOR VALIDITY
h2
EXECUTE IMAGE PROCESSING
h3
g2
RECEIVE FINGERPRINT DATA
TRANSMIT FINGERPRINT DATA
h4
END
END

FIG.27